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# MARKETS FOR AMERICAN FRUITS IN CHINA

WITH RECOMMENDATIONS FOR AMERICAN  
SHIPPERS

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A Fruit Store in Peking

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## CONTENTS.

	Page.		Page.
Introduction.....	3	Possibilities for developing the Chinese	
The fruit industry of China.....	4	markets for American fruits.....	14
Production.....	4	Prospects for fresh fruits.....	15
Exportation of domestic fruits.....	6	Prospects for dried and canned fruits....	17
Importation of fruits.....	7	Recommendations for the American trade...	7
Fresh fruits.....	7	Careful preparation and handling.....	18
Dried fruits.....	8	Utilization of existing trade mediums....	18
The import duty on fruits.....	8	Terms and sales.....	20
Marketing imported fruits.....	9	Establishing special trade-marks.....	21
Wholesale fruit trade.....	9	Suggested market development activities	22
Retail fruit trade.....	9	Special representation important.....	22
American fruit trade with China.....	12	Cooperation a necessity.....	23
Fresh fruits.....	12	Japan as a competitor.....	23
Dried fruits.....	12	Production.....	23
Canned and preserved fruits.....	13	Exportation of fruits.....	24
Storage and inland transportation.....	13		

## INTRODUCTION.

THE CLOSING of the fruit markets of the United Kingdom to imported products and the greatly reduced outlets to the European countries and South America during the war caused an active interest among the growers and shippers of the United States in the possibilities of developing markets across the Pacific. In view of the emergency which confronted the fruit industry by reason of the war, the Bureau of Markets of the Department of Agriculture undertook in 1917 to investigate at first hand the fruit markets of the Far East in order, if possible, to discover new outlets and prepare the way for future development work there.

Growers and shippers of the Pacific coast fruits have long believed that somewhere in the Orient there was, or ought to be, a large outlet for their products. Generally it was assumed that since the purchasing power there was low, it ought to be matched with a low priced and necessarily, a low grade product, and the idea was entertained that if such produce were shipped to the principal ports, it could not fail to meet a ready and unlimited market.

The term "Far East" is a designation applied to those countries of Asia lying east of Persia, Arabia, India and Siam, and includes those bordering along the China Sea, the Yellow Sea, and the Japan Sea of the western Pacific Ocean. The countries of greatest interest to exporters of American fruits are China, the Philippines, Siberia, and Japan.

Of these, China now claims the chief interest of the American fruit industry. In the Philippines the establishment of trade in American fruits was coincident with the American occupation and the trade depends considerably upon the political status of the islands. Siberia at this time can be considered only as a negligible factor. The former source of its rich trade has been abolished and will have to be rebuilt under fundamentally new conditions. Japan, including Chosen, or Korea, is found to be a strong competitor of the United States in the fruit markets of the Far East and is of interest chiefly for that reason. This circular, therefore, is concerned primarily with conditions in China.<sup>1</sup>

## THE FRUIT INDUSTRY OF CHINA.

### PRODUCTION.

The climatic range of China is comparable with that of the United States, but with more of a tropical character in summer. Deciduous fruits are grown abundantly in northern China, citrus fruit, pineapples, and bananas in southern China. Large orchards are not found but innumerable small ones produce a large aggregate of fruit. No attempt is made by the Government to estimate or record these crops; therefore, it is impossible to ascertain the annual production.

Of the native deciduous fruits, peaches are the most appreciated and pears are second. Pears and grapes are continuously on sale, being kept from one year to another by means of cold storage, the principles of which have been thoroughly understood and practiced in China for centuries. The fruit is stored in deep cellars with baskets of broken ice in order to maintain a low temperature.

Southern China exports considerable quantities of oranges to all points in the Far East. The Foochow district, which is one of the largest growing sections, produced approximately 5,000 tons of oranges in 1917 or, in terms of California equivalents, 138,889 boxes of 72 pounds each, a decline of 30 per cent from the 1916 crop. However, the 1917 crop was not up to the standard of average production. The crop of 1915 was estimated to be in excess of 11,000 tons, or 305,555 boxes. Most of the oranges find their way to north China ports, and up to January, 1918, the shipments of the preceding season from Foochow aggregated 2,750 tons. The first shipments for the year to the North were made in November.

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<sup>1</sup> The original report of the studies conducted by the Bureau of Markets, contains detailed treatment of the fruit market possibilities of the Far East, the material being arranged in four parts under the heads of the countries mentioned in the preceding paragraph. The purpose of this circular is to set forth the situation in regard to China. For those who are interested in pursuing the subject further, the results of the investigation written in full are available in manuscript form in the files of the Bureau of Markets and may be borrowed upon request. Advantage is taken of this opportunity to acknowledge the cooperation of the American Consular Service and the Bureau of Foreign and Domestic Commerce, whose Far Eastern representatives rendered valuable assistance throughout the investigation.











FIG. 1.—Commercial map of China and vicinity.



The market in Peking during the month of September showed many varieties of apples, pears, oranges, pomeloes, pomegranates, persimmons, dates, jujubes, several varieties of grapes (including white, red, and purple), peaches, quinces and plums. Walnuts, chestnuts, other nuts, and peanuts were also on sale. Most of the above-mentioned fruits were being sold at prices that seemed low as compared with retail prices in the United States, but the fruits that had been transported long distances were naturally more expensive than those grown close to the market. Lemons were the only American fruit found in the market at this time. American apples reach Peking and Tientsin in limited quantities in November and later.

In Shanghai, on November 26, 1917, the official quotations of the public market included the following items, which are here given in terms of both Mexican and United States currency:

TABLE 1.—*The retail market at Shanghai for domestic and imported fruits.*

Product.	Unit.	Mexican.	Equivalent in U. S. currency.
		<i>Cents.</i>	<i>Cents.</i>
Apples:			
Chinese and Japanese.....	Pound.....	10-13	7.6- 9.8
United States.....	do.....	14-17	10.6-12.9
Canadian.....	do.....	16-20	12.1-15.2
Bananas.....	do.....	5- 6	3.8- 4.5
Coconuts.....	Each.....	15-16	11.4-12.1
Chestnuts.....	Pound.....	8-10	6.0- 7.6
Grapes.....	do.....	12-16	9.1-12.1
Lemons, American.....	Each.....	5- 6	3.8- 4.5
Oranges, native.....	Pound.....	6- 8	4.5- 6.0
Persimmons.....	do.....	6- 8	4.5- 6.0
Pomeloes.....	do.....	12-16	9.1-12.1
Pineapples.....	Each.....	8-10	6.0- 7.6
Pears.....	Pound.....	8-14	6.0-10.6
Walnuts.....	do.....	10-12	7.6- 9.0

The above quotations give a fair idea of the fruit supply and comparative prices in China at a season when American apples and citrus fruits are in the market. Chinese apples had practically disappeared at this time. The grapes and pears were from home storage stocks of north China. There were American oranges in the fruit stores, but at higher prices than those mentioned above. The summer fruits of China are abundant and cheap. They are grown locally almost everywhere. In their season of plenty, during summer and fall, native apples sell in Shanghai for less than \$2 Mexican for 50 pounds, or in terms of American equivalents, at approximately \$1.50 and less per bushel, according to exchange.

The Hongkong market conditions for October and November were somewhat the reverse of those noted in Peking. There were less of the northern or Cheefoo apples and pears and the prices were higher, while citrus fruits and bananas were more plentiful and cheaper than in the North.



## EXPORTATION OF DOMESTIC FRUITS.

China engages in a considerable export fruit trade with the Far Eastern countries, and in certain fruits such as oranges and pears the future possibilities of the trade are believed to be excellent. A large part of this trade is with and through the British port of Hongkong, which serves as the chief distributing point.



FIG. 2.—Exterior of a Shanghai fruit store. This small shop sold more American apples than any other store in China during the 1916-17 season. For interior display see figure 3.

## FRESH FRUITS.

During the six years 1912-1917 China's exports of oranges ranged from 333,839 boxes in 1912 to 243,706 boxes in 1917, a decrease of 27 per cent. Pears showed an irregular movement, increasing from 40,480 boxes in 1912 to 124,461 boxes in 1915, an increase of 207 per cent. Exports of this fruit fell to 72,373 boxes in 1917, which, however, still represented an increase over the export figures for 1912. Exports of all other fresh fruit decreased 37 per cent during this period. These decreases were caused largely by the increased cost of Chinese currency in exchange, the increase in the cost of goods for export being proportionate to the exchange.<sup>1</sup>

<sup>1</sup> Figures are taken from Table 3 in original manuscript, based on China's Maritime Customs: Returns of Trade and Trade Reports (1913, 1915, 1917, Vol. I, Part III). Conversions on basis of 1 picul = 133½ pounds; 1 box oranges = 78 pounds; 1 box pears = 50 pounds; 1 ton = 2,000 pounds.

A large part of the export fruit trade of China is handled by the foreign houses at Shanghai and Hongkong. The fruit is crudely prepared for market and does not present an attractive appearance. It is cheap, however, even with the addition of the export tax of 5 per cent, and its cheapness together with the low charges for transportation, is a prime consideration in foreign markets where the purchasing power is relatively low.

#### DRIED AND PRESERVED FRUITS.

China also carries on a substantial export trade in dried and preserved fruit. The chief product is the dried persimmon, which ordinarily represents about 30 per cent of the total dried fruit trade. The Chinese statistics do not classify other dried fruits separately and it is impossible to show the exact extent of the trade. As in the case of fresh fruits, the trade in dried fruits is handled largely by and through Hongkong. Usually this port receives more than 50 per cent of China's exports. Large quantities, of course, are re-exported to other Far Eastern countries, but in the absence of statistics it is impossible to indicate the full amounts of Chinese dried fruits actually imported by the several countries.

#### IMPORTATION OF FRUITS.

##### FRESH FRUITS.

In the Chinese customs imports returns fruits are not classified, and it is impossible, therefore, to show separately the exact amounts of the several fruits received. However, for the purpose of indicating the extent of China's import trade in fresh fruits as a whole, a statement of the amounts and values of the imports by countries for the years 1910 to 1916, inclusive, is given in terms of American equivalents. Statistics are not available for the preceding years. (See Appendix, Tables 2 and 3.)

The outstanding feature of Table 2 is that China's import trade in fresh fruits has grown extensively since 1910, the first year for which statistics are available. The highest point reached was in 1913, when 29,248,000 pounds were received as compared with 8,602,789 pounds in 1910, thus registering an increase of approximately 240 per cent in a period of four years. A considerable falling off will be noted between 1913 and 1915, the decrease being 23 per cent. In 1916 the imports increased greatly, being little short of the peak in 1913.

The largest import trade in apples is with Japan and the second largest with the United States. Japan exported 18,476 boxes to China in 1911, the United States, 18,298 boxes; Japan's exports of

apples in 1915 amounted to 36,140 boxes, those from the United States to 13,689 boxes. The statistics for Japan are significant, representing substantial increases. The gain between 1911 and 1915 is approximately 96 per cent.

The citrus fruit trade with the United States is very small; still the United States customs records for the eight years ending June 30, 1917, show a steady increase. Imports of oranges in 1910 amounted to 312 boxes, in 1917 to 2,489 boxes; shipments of lemons increased from 1,999 boxes in 1913 to 6,665 boxes in 1917. In 1918 shipments of oranges remained about the same, 2,496 boxes, while the imports of lemons decreased slightly to 5,246 boxes.

#### DRIED FRUITS.

The Chinese import statistics do not classify the varieties for dried fruits. It is interesting to note (see Tables 4 and 5, Appendix) that during the period 1911-1916 China's imports of dried fruits steadily increased.

China draws its dried fruit supplies from many parts of the globe. Hongkong holds the predominating position in the trade, as the tables show. China received 79 per cent of its total imports of dried fruits from Hongkong in 1911 and 83.3 per cent in 1916. It should be remembered that both Hongkong and Macao act as intermediaries or reexport markets for the same overseas countries which supply China directly. The tables, therefore, do not represent the actual extent of the imports from those countries.

The position of Japan in the dried fruit trade with China is the reverse of its position in the fresh fruit trade. The trade is small and decreased more than 100 per cent in six years. It is known also that the Japanese trade through Hongkong and Macao is limited.

Practically no dried fruit has been sent to Chinese territory from Canada and Australia. The chief items contributed by the United States are dried apples, apricots, peaches, prunes, and raisins. More detailed information will be found in the section of this publication dealing specifically with American trade.

#### THE IMPORT DUTY ON FRUITS.

China's rate of duty on fruits is not sufficiently high to interfere with the development of the trade. For fresh and dried fruits the rate is 5 per cent ad valorem plus 5 per cent of the duty as a port charge, which means, for instance, in the case of a box of apples valued at \$2, a custom charge of 10½ cents. When it is necessary to use weights in calculating the value of a cargo net weight is employed.



The duty on preserved and canned fruits is as follows:

	Taels.	American equivalents at prevailing rate of exchange. <sup>1</sup>
Canned fruits (apples, pears, peaches, plums, apricots, grapes):		
For table use, 2½ pound cans, per dozen.....	0.065	\$0.069
For pies, 2½-pound cans, per dozen.....	.057	.060
Jams and jellies:		
1-pound tins, bottles or jars, per dozen.....	.060	.064
2-pound tins, bottles or jars, per dozen.....	.118	.125
Fruits, preserved, in glass bottles, jars, cardboard or wooden boxes, per picul of 133½ pounds.....	.650	.520

<sup>1</sup> Conversions made according to the rate of exchange prevailing at Shanghai August 2, 1920, when 1 tael was worth \$1.06.

## MARKETING IMPORTED FRUITS.

### WHOLESALE FRUIT TRADE.

Wholesale distribution of imported fruits in China is different from the process in the United States. For the most part, the importers are the wholesalers. In many cases the large retailers engage in a wholesale or jobbing trade with small local dealers or with dealers at outports with whom they have continuous connections. But usually the importers sell direct to the retailers or their syndicates.

In considering the limited wholesale distribution in China it should be remembered that thus far the amount of fruit imported has been rather small, and that the sale of the products has been confined to the large shops of a few cities. As the volume of the trade increases it is reasonable to believe that those houses which engage in both a retail and jobbing business may develop into large wholesale distributing establishments and possibly in time may undertake to do their own importing.

### RETAIL FRUIT TRADE.

In China, as in the United States, fruit is handled by a great variety of retail mediums, ranging from the humble peddler, whose capital is his load, to the well-organized, substantial caterer's establishment where the best of everything in the fancy goods line may be purchased. Imported fruits are found only in the best class of stores, as a rule.

In the large cities there are a few department and provision stores owned and operated by foreigners, but they handle only a small part of the fruit sales, even to the foreign population. Many of the Chinese stores cater primarily to foreigners and, because of low expense of operation, are able to and actually do sell for lower prices than the foreign stores.



The native fruits are handled entirely in baskets which are used almost exclusively in displaying fruit. These baskets are of various sizes and shapes and often of artistic design, which adds to the attractiveness of the display. (See cover design.) Here and there in the shops may be seen large earthen jars of antique appearance,

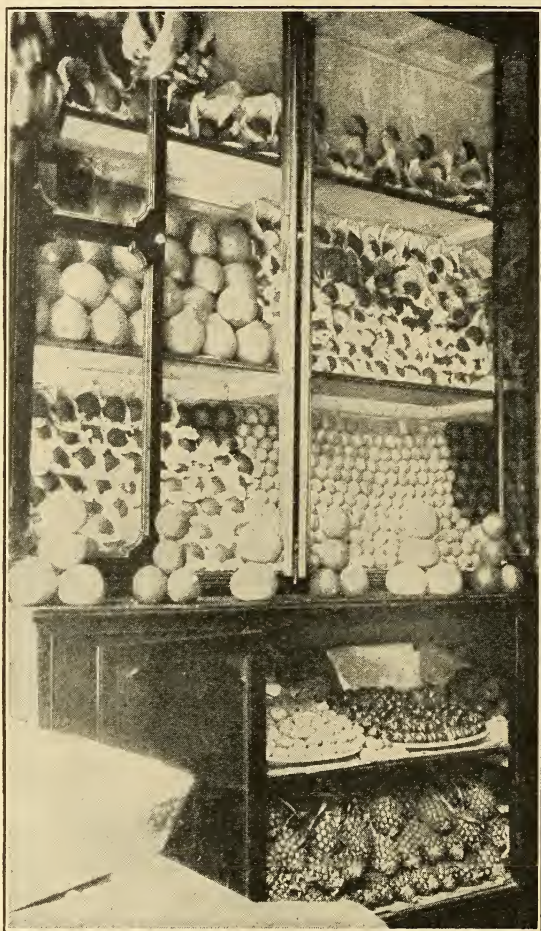


FIG. 3.—A display of fruit in the store shown in figure 2. Bottom shelf holds Amoy pineapples; second shelf, Chinese peaches and plums; third, American oranges and Shantung peaches; fourth, native pomelos, oranges and lemons. On the ledge are California grapefruit and oranges.

which are the cold storages of the retail shop that keep the delicate fruits fresh and cool for the customers.

In the purchase of supplies the retailers, who have a satisfactory credit standing with the compradors, deal as a rule directly with the importers, who grant them liberal terms. Peddlers and small

traders who can not meet the requirements of the compradors buy in limited quantities from some native merchant who may have an intimate acquaintance with them. In many cities large numbers of the retailers purchase their supplies of fruits collectively through their syndicates. They seem to realize and appreciate fully the

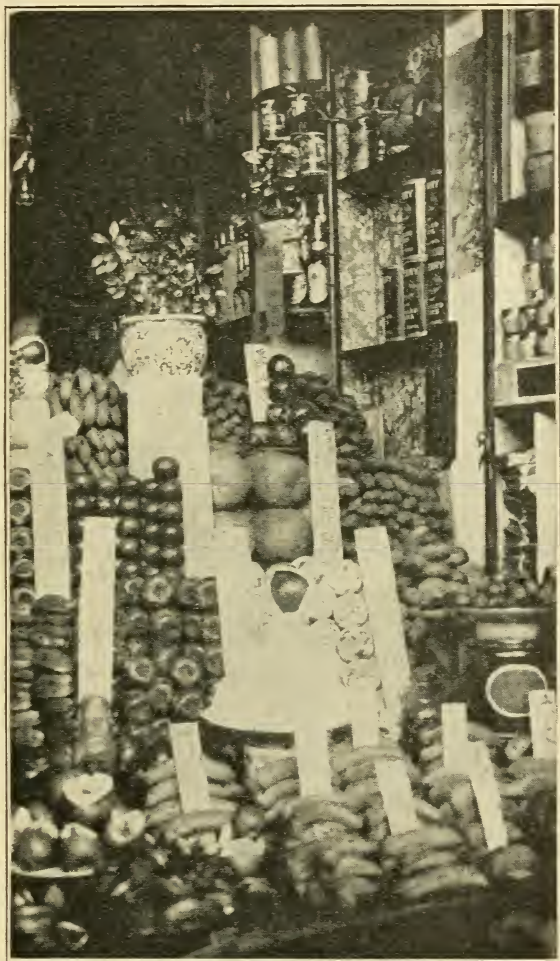


FIG. 4.—The attractive display of a Canton store. All these fruits were native grown with the exception of the plate of wrapped apples, which were Californian.

benefits of cooperation, for which they are very keen. The organization and methods of the syndicates are expressive of the simplicity of the Chinese people. When the retailers find it too difficult to deal as individuals with the importers and their compradors they do not wait for the creation of an independent intermediary to serve them. They simply discuss the matter among themselves, combine in a

loose association, and delegate one or more of their number to secure an estimate of the general requirements. Then they buy in common. The activities of the organization cease when the purchasing is accomplished.

## AMERICAN FRUIT TRADE WITH CHINA.

### FRESH FRUITS.

The largest amount of apples sent to China from the United States in any one year was 24,784 boxes, or approximately 40 carloads. The varieties that meet with most favor are the Yellow Newtown, Esopus (Spitzenberg), and Winesap. The grade best suited to the trade is a good "Fancy" or No. 2, though an "Extra Fancy" is wanted in limited quantities, especially for the Christmas trade. The sizes liked best are 120s to 163s, but both larger and smaller sizes have reasonable demand and sale. As a pack, the standard Northwest apple box seems to be satisfactory for this trade.

The largest annual export of oranges to China was 2,489 boxes and of lemons 6,665 boxes. The export of citrus fruits, while not so large as that of apples, is more gratifying in that it shows a steady increase. All stores where American oranges were displayed had only the large and fairly large sizes, which contrasted favorably with the smaller native oranges. The sizes generally required for oranges are 126s and 150s, and for lemons 300s. The trade, however, has been taking small quantities of 176s in oranges and 360s in lemons.

### DRIED FRUITS.

The chief demand for American dried fruits is found in the winter months. From October to April the goods can be stored and distributed successfully in the ordinary packages. For the rest of the year, however, because of the hot weather, canned goods are used almost exclusively. The grades required are from medium to best. The seedless rather than the seeded raisin is demanded almost entirely.

Statistics for all classes of dried fruits are not available prior to 1906. During the period 1906-1917 the prune trade ranked first, exports from the United States to China as a whole ranging from 75,058 pounds in 1908 to 208,554 pounds in 1917. Raisins rank next in importance, exports from the United States amounting to 66,871 pounds in 1906 and 82,055 pounds in 1917. During the 12 years the total quantity of dried fruits exported to China as a whole fluctuated considerably from year to year, but increased substantially as between the years 1906 and 1917, the advance in the trade being 138 per cent for the period.

Dried apples represented 27 per cent of the total dried fruits exported to China as a whole in 1906 and 14 per cent in 1917, thus



losing considerable importance during the period. The shipments fluctuated widely from year to year, but between the years 1906 and 1917 registered an increase of 23 per cent.

#### CANNED AND PRESERVED FRUITS.

Though the trade of the United States with China in preserved and canned fruits is limited, it has shown a gradual increase. The total trade with China in 1892 amounted to \$59,445; in 1917 this trade was valued at \$90,031 and in 1918 at \$103,958. The exports in 1892 were represented almost entirely by preserved fruits. But at the close of 1917 canned fruits greatly predominated, representing 93 per cent of the total trade in both canned and preserved products.

#### STORAGE AND INLAND TRANSPORTATION.

Cold storage is rarely used in China for imported fresh fruit. Practically all that is imported from America is on order, and there is usually a place for every package immediately upon arrival, so that the fruit goes into consumption without much delay. Usually the weather conditions are good for handling fruit when the first shipments are received in the fall and the ordinary storages, or godowns, are adequate for protecting the products for short periods until the importers are able to effect distribution.

Practically all of the large trans-Pacific lines have wharf and warehouse facilities of their own where the fruit may remain free of charge for periods of approximately 10 days. If the storage is required for longer periods, monthly rates will be quoted. Also there are independent storages which may be used. Some of the large importing houses have their own godowns and thus are independent of public storages.

It is fortunate that cold storage is not a necessity in the present stage of the trade, because the rates for such limited facilities as may be secured at the present time range from 25 to 50 cents per box per month. Small cold storages are operated in the largest cities in connection with the manufacture of ice. As trade in perishable products develops, cold storages will come to be a necessity, and it is reasonable to believe that in time adequate facilities will be available at reasonable rates. Cold storage at fair rates would be of considerable value at the present time, because it would enable importers to keep a supply of fruit on hand in anticipation of orders.

The inland transportation facilities for fruit are simply ordinary box cars and river steamers to the chief inland cities; but the fruit is transported successfully. Although fruit dispatch trains are never found, special facilities such as refrigerator and ventilated cars are sometimes provided. The prevailing cold weather in the northern regions during the importing season makes it impossible to deliver

the products with fair success in the ordinary Chinese way. No rates are published for fruit, but it is understood that ordinarily they are satisfactory. There is no Interstate Commerce Commission or similar agency to regulate rates, so changes without notice are frequent and the shipper must necessarily secure a rate for each shipment.

For the most part the exports have been handled by general export houses, which deal in a great variety of commodities and have branches or agencies in China or, with headquarters in the Orient, have branches or agencies in America. Some of the foreign importers,



FIG. 5.—Partial view of the modern municipally owned Hongkew Public Market at Shanghai. The city also operates the market. Produce of every kind and description, both domestic and imported, may be bought here.

having no agencies in America, simply arrange with brokers, growers, or shippers to fill orders.

#### **POSSIBILITIES FOR DEVELOPING THE CHINESE MARKETS FOR AMERICAN FRUITS.**

The potential demand in China is large. One-quarter of the population of the world is there. Wherever there are settlements of Caucasians, foreign fruits are demanded, and this demand is gradually extending among the Chinese themselves. The latter are great lovers and consumers of fruit, but under present conditions the masses are compelled to content themselves with the cheaper home-grown kinds. It should not be overlooked, however, that a great many Chinese of high official and business standing are abundantly able to buy any goods or fruits they wish. The increased wage-earning capacity of the native Chinese laborer now perceptible in much of the country, with its attendant benefits to all classes, together with the improve-

ment of inland transportation which is gradually developing, will inevitably enable a large proportion of the people to indulge in what are now luxuries beyond their reach.

#### PROSPECTS FOR FRESH FRUITS.

##### APPLES.

Prospectively, the market for apples is more susceptible of expansion than for other fruits. The quality of texture and flavor of the North American apple is so far superior to the Chinese and Japanese apple that it holds a distinct position in the trade. Aggressive action on the part of the shippers and importers carried out somewhat along

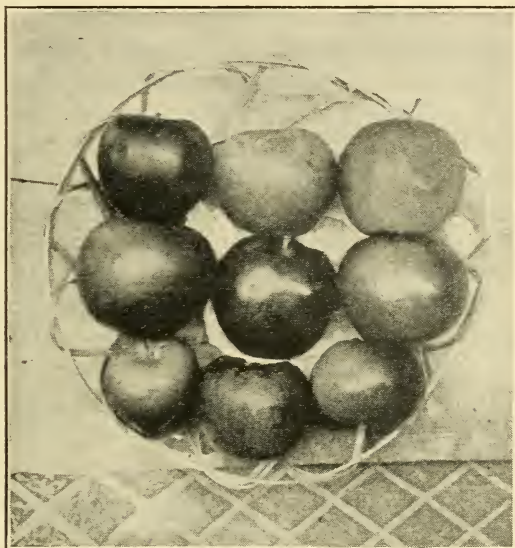


FIG. 6.—Basket of various apples from many countries found on sale in Shanghai in December, 1917. Top row, left to right, American Winesap, Newtown and Gano; middle row, Canadian Newtown, Esopus (Spitzenberg), and Cox Orange; bottom row, Chinese pearmain, Japanese Jonathan and California Newtown.

lines recommended later in this circular should secure a substantial increase from year to year, and in course of time, as China develops, should result in a trade of distinct value to the American apple industry.

In this connection the outlook as to competition with other countries which produce and export apples is worth considering. Apparently there will continue to be a strong competition of the cheap apples of poorer quality from Japan and Chosen, which even resident foreigners often purchase for cooking purposes, but these will not take the place of American and Canadian apples for dessert purposes. The extent of the Japanese industry and the competition from this source are treated in a separate section.



Canadian exports of apples to China are much less than those of the United States. The existence of this trade is based to a considerable extent on a feeling of loyalty on the part of the English in China for products of the "home country." Of greater importance is the fact that the excellence of the fruit commends it to the consumers generally. Imports of Canadian apples are all of high quality, such as the Jonathan, Grimes, Cox Orange, Esopus (Spitzenberg), and Yellow Newtown, whereas the imports of American apples consist of Ben Davis, Ganos, Winesaps, and Yellow Newtowns, the first-named variety predominating.

As fruit men of the Pacific Northwest are aware, British Columbia apples differ but little from apples grown in the United States and are in no way superior to them. The market prices are about the same at shipping points. It was found that in China, however, the Canadian apples generally sell at slightly higher prices than apples from the United States. The trade in China for Canadian apples is almost entirely in the hands of British stores, who prefer to handle an exclusive line in which the least competition is encountered. Their retail prices by the box range, in "Mexican," from \$2 to \$4 higher than is asked for apples from the United States. While the production of apples and the marketing arrangements in British Columbia are not comparable to those in the Pacific Northwest States, nevertheless the Canadians will undoubtedly present rather keen competition in the Chinese markets because of their foresight in introducing the best varieties and thus gaining a reputation for producing the best fruit.

#### DECIDUOUS FRUITS OTHER THAN APPLES.

Fresh American deciduous fruits other than apples have not reached China in noticeable quantities. At the present time, however, limited openings for some varieties of late pears and possibly cherries from the intermountain districts of the Pacific Northwest may be found, because of the superior texture of the deciduous fruit from that region. There is also the possibility of a small opening for the hardier varieties of California grapes, such as the Red Emperor and Malaga. A firm of importers at Shanghai, as the result of an interview with the representative of the Bureau of Markets, became considerably interested in the possibility of introducing American grapes and invited experimental shipments.

It should be realized, however, that for the present and near future any possibilities which may develop for deciduous fruits will be limited almost entirely to the Caucasian population. The Chinese production is rather bountiful, although the quality of the fruit is inferior to the quality of the American products.



## CITRUS FRUITS.

The prospects for marketing American lemons and oranges are not encouraging at the present time. While the exports of these products to China have steadily increased in recent years, the advance is represented almost entirely by increased consumption among the Caucasian population. These fruits do not seem to gain much in popularity with the Chinese, who depend upon the domestic supply. It is extremely doubtful, therefore, whether the markets would respond appreciably to efforts to introduce American citrus fruit among the Chinese at any time in the near future.

## PROSPECTS FOR DRIED AND CANNED FRUITS.

The lack of modern drying and canning establishments in China, and the relatively low prices of the American products as compared with the fresh fruits, together with the possibility of using even the crudest of Chinese transportation systems, all offer attractive opportunities for American dried and canned fruits. The well-to-do Chinese are becoming accustomed gradually to the use of these products and it is significant that the trade demands the best grades.

The drying and canning of fruits is not carried on extensively as an industry. The simple arts of drying are known and practiced, but a satisfactory product is not secured. Furthermore, the fruit-growing industry is not developed to the point where it would support the evaporating and canning of fruit on a commercial scale sufficient to make severe competition for American products. Raisins are not produced at all. The only canneries which pack fruits are at Amoy, Kiukang and Shanghai. Their chief output, however, consists of fish and meats, the fruit output being altogether insignificant.

As an indication of the possibilities for increase in the marketing and consumption of dried fruits, attention is called to the extensive advance in this trade which occurred between 1916 and 1917, as shown by Table 6, Appendix. During the latter year the trade became especially active and exceeded greatly the heaviest exports of any previous year. The rate of increase from 1916 to 1917 was 124 per cent for dried apples, 238 per cent for apricots, 394 per cent for peaches, 58 per cent for prunes and 9 per cent for raisins.

## RECOMMENDATIONS FOR THE AMERICAN TRADE.

In developing the fruit market possibilities in the Far East much will depend on the methods pursued by the American industry. American exporters must pursue special methods in the case of China, where business systems are not susceptible to quick change or reform. In suggesting methods for procedure, the problems that will be encountered should be borne in mind. First of all, the proper selection, preparation and handling of the fruit must be considered.

Then the problems of transportation and adjustment of the supply are extremely important. Furthermore, sales arrangements, financing, establishing and maintaining trade-marks, advertising and market development work must be studied.

#### CAREFUL PREPARATION AND HANDLING.

Success in developing the markets of China for American fruits will be dependent largely upon the delivery of sound fruit, properly graded and packed. Aside from the careful selection of varieties, sizes and grades for individual market districts in China, emphasis is placed upon the extreme care necessary in picking and packing operations, and upon promptness in handling after picking so that

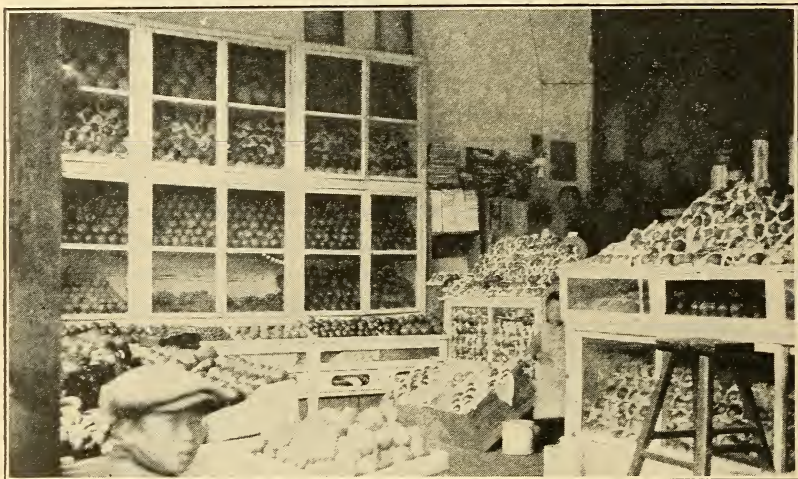


FIG. 7.—The neatness and orderly attractive appearance of this Shanghai fruit store are noteworthy. The cases which are faced with glass are designed not only for display but for the protection of the fruit from heat, dust, and flies. The best fruit rarely is displayed on open counters or at the front.

a minimum of time elapses between picking and shipment or storage.

The box shooks should be of good grade; all boxed fruits need to be packed firmly and the boxes require extra nailing and strapping at the ends to prevent breakage in handling. The loss from breakage does not seem to be sufficiently extensive to justify different or stronger packages than those now used on the Pacific coast.

Inspectors should be placed at the ship when it is being loaded to see that boxes are not piled on the bulge and that the cargo receives the proper stowing. Two by four dunnage should be nailed to the floor of the compartment and spaced so as to catch the ends of the boxes, thus leaving an air space underneath the load. At least a 2-inch space should be allowed between the boxes and the

side of the compartment, and spaces also should be allowed between all tiers of boxes, sufficient dunnage being used to insure a rigid load.

In the efficient control of the refrigerating compartment, the use of the thermograph will be of assistance in maintaining a greater degree of uniformity in the temperatures during the voyage. The maintenance of a uniform temperature of about 32° F. is desirable, allowing this to rise to 45° or 50° F. during the last day or two of the voyage. The ship's engineer should be kept informed of the temperatures recorded during the trip.

In the case of shipment in ventilated compartments, it is highly important to keep the temperature as low as possible. For this purpose bountiful spaces should be allowed at the top, bottom and sides, and at intervals within the load. If possible, forced ventilation should be maintained throughout the voyage, in order to keep the compartments flushed with cool, fresh air from the outside.

Looking to the extension of the trade and the possible necessity of carrying a stock of fruit in China, the exporters and importers ought to encourage in every possible way the operation of adequate cold storages at reasonable rates both at Hongkong and Shanghai. In time the coolers may prove to be valuable in equalizing the supply of fruit in the markets.

#### UTILIZATION OF EXISTING TRADE MEDIUMS.

In China the utilization of the existing trade channels is not only the proper course, it is the essential one. The national trait of pursuing trodden paths is not conducive to the introduction of innovations. China's conservatism is so noted that the wisest course is to follow the methods which have proved to be acceptable to the people with whom trade is desired.

It is suggested that the fruit shippers carefully select from among the importers at Shanghai and at Hongkong one firm to serve as the import agent for all. When the selection is made the agent should be allowed the widest possible powers under the uniform arrangements for all the shippers participating in the trade. The nature and extent of the market development work to be carried on by the agent, as well as all other essential terms, should be specified in contract form.

A number of the importers who have engaged in handling American fruits strongly urged the maintenance of an exclusive agency and were emphatic in their statements that satisfactory results can not be accomplished so long as the business is handled by a number of firms. They cited numerous cases in support of their conclusions and some of them stated that they had discontinued all activity in this trade as a result of the uncertainties caused by the old methods.



## TERMS AND SALES.

It is believed best to conduct the trade in the beginning upon a wisely directed consignment basis, the shipments to be allocated among the various shippers and made upon the advice of the importing agent. Under this method the markets in China would be assured of a bountiful supply at all times; any losses would be distributed equitably among the shippers to be absorbed in the pools, and disastrous dumping, which so frequently results from open consignments, could be strictly avoided.

In lieu of open consignment, cost, insurance, freight terms would be the next best suited to market development work. Under this system the importing agent of the American shippers, if not handicapped by unduly high prices based on prevailing values in America, and if allowed discretionary powers, could solicit orders in advance of shipment at definite prices to be paid upon arrival of the goods in the Chinese port.

If the business is handled upon the basis described in the preceding paragraph, it should be clearly stipulated in the contract between the American shipper and the importer that the importer's remuneration is to be limited solely to an agreed commission. Otherwise, at times the temptation may arise of exacting an exorbitant margin of profit, thereby effectively obstructing the processes of trade expansion. At all times it ought to be remembered that the future of the trade will depend upon delivering the products to the consumers at relatively low prices.

In developing Chinese trade, *f. o. b.* terms will be the least effective. Under this method the Chinese merchants will not book orders in advance of shipment except as the importing agent may assume the responsibility of selling to them *c. i. f.* The burden of the transaction rests entirely upon him, and the business would become a buying and selling trade between the shipper and the importer. If this method were adopted the shippers virtually would register little progress and eventually would revert to the status quo of past times in so far as trade with China is concerned.

As a general rule Chinese credits are good. The American fruit shippers may find it of considerable advantage as a trade-promotion factor to allow the import agent and the Chinese merchants the most liberal credit possible. If the agent is required to remit before collections are made the trade naturally will be somewhat restricted.

If the merchants are required always to pay upon delivery, they are likely to seek more liberal competitive services. In this connection the possibilities of the "acceptance" form of draft are commended to the shippers. The "acceptance" is nothing more than an acknowledgment on the part of the consignee for the receipt of the goods and his promise to pay the amount of the bill within a specified time.

The "acceptance" draft with shipping documents attached may be handled by the shipper through his local bank just as an ordinary draft, thereby securing the funds when shipment is made. The advantage of this method would be very decided in developing the Chinese fruit markets by greatly extending the operating power of the import agent and the buying power of the Chinese merchant.

#### ESTABLISHING SPECIAL TRADE-MARKS.

It is of the utmost importance that the Pacific coast shippers adopt, establish and maintain special distinctive trade-marks for China. These trade-marks should show a striking design, with the customary

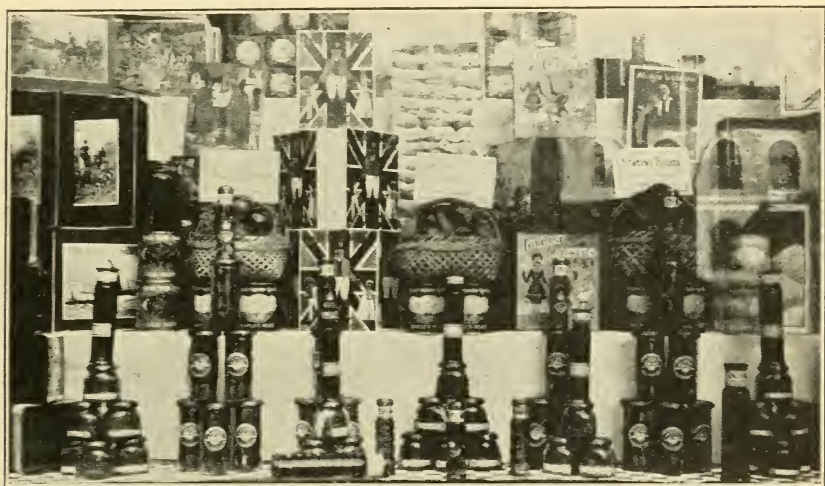


FIG. 8.—This show window maintained at Shanghai by a British department store contains Canadian apples, American biscuits, California canned fruits, etc.

description of contents printed in both English and Chinese. The trade-mark should be registered in China and also in Japan before it is used in the trade, because the laws of Japan give all rights to priority of registration rather than use.

The multiplicity of brands or "chops," as the Chinese call them, in the Pacific coast industry is confusing to foreigners and accordingly much of the advertising value is lost. Furthermore, in addition to the necessity of a uniform supply of fruit, it is highly important to make available to the Chinese trade a uniform supply of given brands of fruit. This is impossible when many different brands are used, as the majority of the shippers can not ship by every boat.

Thus maintained and controlled, year in and year out, without change of grades to meet seasonal conditions, the trade-mark would represent the fruit industry of the entire region rather than individual shippers, and therefore would be unaffected by the shifting fortunes of the individuals.

**SUGGESTED MARKET DEVELOPMENT ACTIVITIES.**

Fruit advertising or publicity campaigns would be of considerable value in developing markets. There are hundreds of newspapers published in many languages in China, and judicious use should be made of them, both in paid announcements and in news articles, in order that the consumers may be impressed properly with the numerous ways of utilizing fruit. Suitable films for moving-picture entertainments, showing surroundings incidental to orcharding in the United States, and phases of packing and handling, could be obtained and used to great advantage. In connection with all publicity the special brands should be featured. A wise and timely distribu-



FIG. 9.—A modern fruit store in Shanghai. The wide open front is typical. The display of fruit in the foreground is the bargain counter on which are placed defective fruits marked down to attractive prices. The best fruit is kept inside either in glass cases or earthen jars. The method of display is characteristic of practically all Chinese stores.

tion of apples as gifts and for use at special banquets or upon other occasions would appeal strongly.

**SPECIAL REPRESENTATION IMPORTANT.**

It is important that the Pacific coast fruit industry maintain a capable special representative in China to supervise the marketing and distribution of the products, and in cooperation with the import agent to carry on the necessary market development work. It ought to be remembered that import agents do not engage exclusively in the fruit business, that their interests are diverse, and that while they may handle specific sales successfully it would be too much to expect that they would concentrate adequately upon market development work for a particular product. A special representative to secure first hand information as to the disposition of the goods, to supervise the



work of the import agent, and to conduct a broad promotion policy, would be invaluable in this trade. The experience of the California canners and other American institutions marketing goods in China evidences the wisdom of such a course.

#### COOPERATION A NECESSITY.

The foregoing suggestions are made with a view to organized activities in developing the possibilities of the Chinese market. Individual growers and shippers, if acting separately, can not secure satisfactory results. The concentrated efforts of the fruit industry of a given region are essential, because otherwise it would be impossible to carry out a constructive program of work. The problems and hazards involved are too great for the individual. This is evidenced by the fact that shippers in the past have been altogether inactive in the Far Eastern trade. Strong organization is essential for applying the recommendations that have been outlined. Through cooperation, the burden of developing the markets would be distributed equitably without the discouragement which is incident to individual enterprise. In this connection the creation of new organizations is not recommended as necessary, but existing organizations are strongly urged to eliminate friction and loss of concentration.

#### JAPAN AS A COMPETITOR.

For many years the Japanese Government has been fostering and protecting the fruit-growing industry both in Japan and Chosen; first, by imposing practically prohibitive duties on foreign fruit and secondly, by furnishing nursery stock, and otherwise aiding the growers in perfecting and improving methods of culture and handling.

#### PRODUCTION.

Apple culture in the Japanese Empire is a rapidly growing industry. The combined production of Japan and Chosen in 1916 was 1,717,491 boxes, equaling approximately 2,860 American carloads. In 1906 the production of Japan proper had been approximately 1,562 American carloads, and this number practically represents the entire yield, both of Japan and Chosen that year, because at that time the production of Chosen was negligible. During the 11 years, therefore, the total production of the Empire increased approximately 83 per cent.

The principal varieties of apples grown in the Japanese Empire are Jonathans, Ralls (Rawle's Jenets), Ben Davis and Winesaps, all well-known varieties. However, close inspection is not required to show that these varieties grown in Japan do not maintain the characteristics of the American product. The quality is distinctly inferior. There seems to be something in the soil or climate that makes it impossible to produce apples of fine flavor; on young trees the fruit grows to good size, but on the older trees it is generally small.



The pear industry of Japan is of considerable importance. During the period 1910-1916 the total production increased 25 per cent, the crop of 1916 amounting to 4,073,253 boxes American measure. The value of the crop in 1916 averaged 64 cents per American box measure.

The citrus fruit industry of Japan appears to be enormous. In 1910 the number of citrus fruit trees, according to Japan's official statistics, was 19,876,840, as compared with 16,887,170 for the United States. But although the plantings in Japan appeared to be greatly in excess of the plantings in America, still the Japanese production falls far short of the production in the United States, which was placed by the census of 1910 at 23,502,128 boxes, while the Japanese statistics indicated a total production of approximately 6,200,000 boxes of American measure. The Japanese citrus fruit industry runs largely to oranges. Of these the mandarin greatly exceeds all other varieties combined. The production of lemons and grapefruit is negligible and no separate statistics are kept for them.

#### EXPORTATION OF FRUITS.

The operation of innumerable ships between Japan and continental Asia has enabled the Japanese exporter to place his fruits directly into all ports and inland cities at relatively low cost. The presence of numerous Japanese importers and dealers throughout the Orient has constituted an effective medium through which to promote markets for the Japanese products.

It is interesting to note that in trading with south China, Japan, unlike the United States, does not depend upon Hongkong as an intermediary. Kwantung Province, which lies just back of Hongkong, is next to the largest direct receiver of Japanese apples. This trade is handled largely through the city of Canton.

Between 1910 and 1915 the total exports of apples increased 50 per cent. The peak was reached in 1914, when 270,620 boxes, equaling approximately 450 American carloads, were exported. Of the total exports of 1915, China received 16 per cent, Siberia 76 per cent and the Philippines 5 per cent.

The export trade in citrus fruits is confined largely to mandarin oranges, and this is the only type officially recorded by the Japanese Government. During the period 1910-1915 the height of the mandarin trade was reached in 1913, when the equivalent of 472,164 American boxes were exported. This amount was absorbed largely by the two principal markets, Kwantung Province and Siberia, the former receiving 45 per cent, the latter 38 per cent. The trade with China exclusive of Kwantung Province is small, 24,079 boxes being the largest amount sent to that destination in any one year during the period 1910-1915.

During the same period Japan began a small trade with the Philippines and Australia. It is believed that the Japanese orange may grow to be a formidable competitor of the United States in these markets. In addition to the fact that Japan is a large producer and exporter of fruit, the policy of the Government apparently is designed to exclude or to discourage as far as possible the importation of foreign fruits. The policy seems to be accepted generally by the people and all efforts to introduce foreign fruits on a substantial scale into Japan have failed.

## APPENDIX.

TABLE 2.—*Quantity and origin of fresh fruits entered at Chinese ports, 1910-1916.*<sup>1</sup>

Countries.	1910	1911	1912	1913	1914	1915	1916
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Fresh fruits.....	8,602,739	11,673,600	19,626,533	29,248,000	29,289,067	22,519,333	27,620,800
Australasia.....	<sup>2</sup> 14,795	24,400	18,400	28,933	25,467	6,000	53,867
Canada.....	<sup>2</sup> 15,664	21,332	28,133	533	88,800	30,267	53,067
Hongkong.....	3,385,333	3,644,000	2,925,467	3,130,000	5,808,534	3,363,200	4,960,000
Japan, including Formosa.....	1,757,467	4,831,467	11,385,467	19,973,067	15,933,200	11,393,333	17,754,933
Korea (Chosen).....	97,067	136,933	112,400	234,267	368,933	179,467	621,600
Macao.....	861,600	945,333	1,012,800	1,487,733	2,422,667	2,460,933	962,133
Russia.....	2,346,660	1,942,134	3,841,067	4,107,733	4,258,400	4,831,866	2,818,800
United States.....	<sup>2</sup> 119,080	122,000	271,600	270,667	304,533	248,800	379,333
All other countries...	5,067	6,000	29,199	15,067	28,533	5,467	17,067

<sup>1</sup> This table includes reexports. Figures are based on China's Maritime Customs: Returns of Trade and Trade Reports (1911, 1914, and 1917), Vol. I, Part III. Conversion is on basis of 1 picul=133½ pounds.

<sup>2</sup> The Chinese official report gives no returns. The amounts here indicated are based on estimates made on the values given in Table 9, original manuscript.

TABLE 3.—*Value and origin of fresh fruit entered from various countries at Chinese ports, 1910-1916.*<sup>1</sup>

Countries.	1910	1911	1912	1913	1914	1915	1916
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Fresh fruits.....	185,928	243,625	433,703	486,023	508,472	362,571	534,329
Australasia.....	1,480	2,444	1,175	1,685	1,550	892	31,169
Canada.....	1,544	2,103	1,608	22	2,135	1,503	3,118
Hongkong.....	55,030	39,346	37,846	40,497	104,364	40,434	74,766
Japan, including Formosa.....	42,650	94,336	220,013	289,311	219,834	155,534	285,682
Korea (Chosen).....	1,809	2,710	3,018	4,972	7,727	3,252	18,138
Macao.....	7,698	8,297	10,679	19,555	39,938	32,117	14,287
Russia.....	56,552	77,578	133,485	106,965	113,394	111,627	84,517
United States.....	15,652	16,036	24,099	20,566	16,789	17,272	51,112
All other countries...	3,513	516	780	2,456	2,741	440	540

<sup>1</sup> This table includes reexports. The value represents cost in the countries of origin. The Chinese statistics, from which the above table is compiled, are in terms of *hai*kwan taels. In translating the value for the imports, the following rates of exchange of the tael were observed for the several years: 1910, \$0.66; 1911, \$0.65; 1912, \$0.74; 1913, \$0.73; 1914, \$0.67; 1915, \$0.61; 1916, \$0.83. Figures are based on China's Maritime Customs: Returns of Trade and Trade Reports (1911, 1914, 1917), Vol. I, Part III.

TABLE 4.—*Quantity and origin of dried fruits entered at Chinese ports, 1911–1916.*<sup>1</sup>

Countries.	1911	1912	1913	1914	1915	1916
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Dried fruits.....	10,348,305	11,667,700	11,681,966	12,008,751	11,717,200	14,433,200
Australasia.....	<sup>2</sup> 31,682	<sup>2</sup> 11,300	<sup>2</sup> 41,837	<sup>2</sup> 3,232	267	134
Canada.....	<sup>2</sup> 90		<sup>2</sup> 62	1,600		
Hongkong.....	8,176,267	9,050,133	10,289,600	10,563,500	10,201,200	12,016,267
Japan, including Formosa.	596,533	410,267	218,400	121,600	337,733	476,533
Korea (Chosen).....	28,533	1,067	3,200	43,333	18,667	28,133
Macao.....	987,733	656,133	724,267	775,600	720,000	1,561,333
Russia.....	281,467	1,176,133	157,200	125,733	227,866	58,533
United States.....	104,933	182,267	120,533	98,933	98,667	177,200
All other countries.....	141,067	180,400	163,867	275,200	112,800	115,067

<sup>1</sup> This table includes reexports. Figures are based on China's Maritime Customs: Returns of Trade and Trade Reports (1911, 1914, 1917), Vol. I, Part III.

<sup>2</sup> The trade returns of China give no returns. Amounts are based on estimates made or values given in Table 14, original manuscript.

Conversion of the picul is on the basis 1 picul=133½ pounds.

TABLE 5.—*Value of dried fruits entered at Chinese ports, 1911–1916.*<sup>1</sup>

Countries.	1911	1912	1913	1914	1915	1916
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Dried fruits.....	467,696	555,234	560,113	603,695	417,926	674,993
Australasia.....	3,897	1,400	595	400	33	12
Canada.....	38		26	671		
Hongkong.....	331,538	402,222	453,278	482,448	339,952	564,130
Japan, including Formosa.	11,512	9,677	10,700	13,357	17,453	19,595
Korea (Chosen).....	562	43	350	815	1,042	519
Macao.....	46,570	27,160	29,979	33,917	27,605	51,788
Russia.....	23,223	63,148	17,623	13,720	14,132	8,441
United States.....	20,573	26,651	24,540	28,380	8,661	17,256
All other countries.....	29,783	24,933	23,022	29,987	9,047	13,282

<sup>1</sup> The table includes reexports. The values represent costs in the countries of origin. The figures are based on China's Maritime Customs: Returns of Trade and Trade Reports (1911, 1914, 1917), Vol. I, Part III. Conversion of the haikwan tael for the several years has been on the basis of the following rates of exchange: 1910, \$0.66; 1911, \$0.65; 1912, \$0.74; 1913, \$0.73; 1914, \$0.67; 1915, \$0.625; 1916, \$0.79.

TABLE 6.—*Exports of dried fruits from United States to China proper and Hongkong, 1906–1918.*

[From the customs returns in the United States Commerce and Navigation Reports.]

Year.	Dried apples.			Dried apricots.			Raisins.		
	China proper.	Hong-kong.	China as a whole.	China proper.	Hong-kong.	China as a whole.	China proper.	Hong-kong.	China as a whole.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1906.....	41,412	25,459	66,871	10,921	1,973	12,894	35,241	10,430	45,671
1907.....	50,237	15,535	65,772	6,415	900	7,315	51,130	11,957	63,087
1908.....	10,994	10,950	21,944	2,265	540	2,805	21,421	14,228	35,469
1909.....	19,935	16,000	35,935	4,044	2,235	6,279	24,808	16,791	41,599
1910.....	24,875	14,460	39,335	4,675	4,400	9,075	24,925	46,525	71,450
1911.....	22,950	13,895	36,845	6,210	3,450	9,660	34,950	19,385	54,335
1912.....	30,517	9,650	40,167	9,358	4,575	13,933	36,260	50,423	86,683
1913.....	37,400	18,400	55,800	23,690	7,795	31,485	56,253	62,477	118,730
1914.....	35,725	18,470	54,195	12,571	5,450	18,021	85,107	41,741	126,848
1915.....	23,840	10,475	34,315	16,883	3,645	20,528	48,925	65,017	113,942
1916.....	22,055	14,595	36,650	22,497	7,146	29,643	50,202	81,089	131,291
1917.....	70,680	11,375	82,055	19,627	80,530	100,157	77,393	65,904	143,297
1918.....	50,290	15,926	66,216	41,306	11,593	52,899	179,313	121,111	300,424

TABLE 6.—Exports of dried fruits from United States to China proper and Hongkong, 1906-1918—Continued.

Year.	Prunes.			Dried peaches.			Total.		
	China proper.	Hong-kong.	China as a whole.	China proper.	Hong-kong.	China as a whole.	China proper.	Hong-kong.	China as a whole.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1906.....	86,822	23,375	110,197	14,188	960	15,078	188,514	62,197	250,711
1907.....	67,233	13,888	81,121	4,170	145	4,315	179,185	42,425	221,610
1908.....	58,178	16,880	75,058	770	180	950	93,448	42,778	136,226
1909.....	56,730	23,640	80,370	1,550	75	1,625	107,067	58,741	165,808
1910.....	54,435	21,680	76,115	2,000	650	2,650	110,910	87,715	198,625
1911.....	55,965	23,141	79,106	3,844	325	4,169	123,919	60,196	184,115
1912.....	55,111	24,085	79,196	4,465	1,310	5,775	135,711	90,043	225,754
1913.....	129,880	28,807	158,687	17,110	1,894	19,004	264,333	119,373	383,706
1914.....	73,865	29,305	103,170	7,125	965	8,090	214,393	95,931	310,324
1915.....	80,072	22,382	102,454	12,861	400	13,261	182,581	101,919	284,500
1916.....	97,699	34,545	132,244	11,090	1,773	12,863	203,543	139,148	342,691
1917.....	171,325	37,229	208,554	62,555	950	63,505	401,580	195,988	597,568
1918.....	157,242	38,505	195,747	20,973	1,146	22,119	449,124	188,281	637,405









